CLAIMS

1. Method to have a real time data communication between a first user (U1) of a source (S) and a second user (U2) of a destination (DT) via at least partly a real time data transport protocol over Internet Protocol communication network, said method comprises transmitting by a transmitting means (TR) of said source (S) at least two packets (T1, T2, T3, T4) to said destination (D); and determining by a receiving means (REC) of said destination (D) for each one (T2) of said at least two packets (T1, T2, T3, T4), time information (T2_t2) related to a receiving time (t2) of said packet (T2), **characterized** in that said method further comprises applying by said transmitting means (TR) for each one (T2) of said at least two packets (T1, T2, T3, T4) a predefined packet length (l2) out of a plurality of packet lengths (l1, l2, ..., li) in order to be transmitted according to said transmitting step; and determining by a first determining means (DET1), according to each said time information (T1_t1, T2_t2, T3_t3, T4_t4) associated to said at least two packets (T1, T2, T3, T4) of said receiving means (REC), and according to each said predefined packet length (l1, l2, l3, l4) associated to said at least two packets, characteristics of a first relation (f1(T, α)) between a packet length of a packet to be transmitted from said source (S) to said destination (D) and a source to destination delay (d-S2D) being a time period between said transmission of said packet by said source (S) and reception of said packet by said destination (D); and determining by a second determining means (DET2) a preferred mouth to ear delay (d-M2E-pref) according to a preferred quality rating (Q-pref) for said real time data communication; and determining by a third determining means (DET3) an optimal packet length (l-opt) for said preferred mouth to ear delay (d-M2E-pref) and according to said characteristics of said first relation (f1(T, α)) in order to be applied by said source (S) for packets being transmitted during said real time data communication.

2. The method according to claim 1, characterized in that said step of determining by said third determining means (DET3) further comprises

determining said optimal packet length (l-opt) also according to characteristics of a second function f2(Tenc, Rcod)), said characteristics of said second function f2(Tenc, Rcod)) being determined and provided by a fourth determining means (DET4) according to a relation between a packet length and an intrinsic source (S) delay.

3. The method according to any one of claim 1 and claim 2, characterized in that said method further comprises a step of providing said characteristics of said first relation (f1(T,α)) from said first determining means (DET1) to said third determining means (DET3) by using reports of a real time transport protocol (RTP) control protocol (RTCP).

4. The method according to any one of claim 1 to claim 3, characterized in by tuning said preferred quality rating during said real time data communication, repeating said steps of said method and determining thereby according to said step of determining by a third determining means an optimal packet length, an adapted optimal packet length (l-opt') in order to be applied by said source for packets being transmitted during a following part of said real time data communication.

5. Source (S) for use by a first user (U1) to have a communication via at least partly a real time data transport protocol over Internet Protocol communication network (IP) with a second user (U2) of a destination (D) coupled to said source (S), said source comprises a transmitting means (TR) to transmit at least two packets (T1, T2, T3, T4) to said destination (D) in order to enable a receiving means (REC) of said destination (D) to determine for each one (T2) of said at least two packets (T1, T2, T3, T4), time information (T2_t2) related to a receiving time (t2) of said one packet (T2), **characterized** in that said transmitting means (TR) is enabled to apply for each one (T2) of said at least two packet (T1, T2, T3, T4) a predefined packet length (l2) out of a plurality of packet lengths (l1, l2, ..., li) in order to be transmitted accordingly, and that said source (S) further comprises a first interface (IN1) to interface with

a third determining means (DET3) and to receive an optimal packet length (l-opt) to be applied by said source (S) for packets being transmitted during said real time data communication, said optimal packet length (l-opt) being determined by said third determining means (DET3) for a preferred mouth to ear delay ((d-M2E-pref) being provided by a second determining means (DET2) and according to characteristics of a first relation (f1(T,α)) being provided by a first determining means (DET1), said characteristics of said first relation (f1(T,α)) which is a relation between a packet length of a packet to be transmitted from said source (S) to said destination (D) and a source to destination delay (d-S2D) being a time period between said transmission of said packet by said source (S) and reception of said packet by said destination (D), being determined by said first determining means (DET1) according to time information (T1_t1, T2_t2, T3_t3, T4_t4) being associated to each one of said at least two packets (T1, T2, T3, T4) and according to each said predefined packet length (l1, l2, l3, l4) being associated to said at least two packets (T1, T2, T3, T4), said preferred mouth to ear delay (d-M2E-pref) being determined by said second determining means (DET2) according to a preferred quality rating (Q).

6. The source (S) according to claim 5, characterized in that said source further comprises a third interface (IN3) to provide to a fourth determining means (DET4) source intrinsic information in order to enable thereby said fourth determining means (DET4) to determine characteristics of a second function f2(Tenc, Rcod)) being a relation between a packet length and an intrinsic source (S) delay and to provide said characteristics of said second function f2(Tenc, Rcod)) to said third determining means (DET3), and in order to enable said third determining means (DET3) to determine said optimal packet length (l-opt) also according to said characteristics of said second function (f2(Tenc, Rcod)).

7. The source (S) according claim 5, characterized in that said source (S) comprises any one of said second determining means (DET2) and said third determining means (DET3).

8. The source (S) according to claim 6, characterized in that said source (S) comprises said fourth determining means (DET4).

9. A destination (D) for use by a second user (U2) to have a communication via at least partly a real time data transport protocol over Internet Protocol communication (IP) with a first user (U1) of a source (S) coupled to said destination (D), said destination (D) comprises receiving means (REC) to receive at least two packets (T1, T2, T3, T4) from said source (S) in order to determine for each one (T2) of said at least two packets (T1, T2, T3, T4) time information (T2_t2) related to a receiving time (t2) of said one packet (T2), **characterized** in that for each one (T2) of said at least two packets (T1, T2, T3, T4) a predefined packet length (l2) out of a plurality of packet lengths (l1, l2, ..., li) is applied by said source (S); and that said receiving means (REC) further comprises a second interface (IN2) to provide to a first determining means said time information (T1_t1, T2_t2, T3_t3, T4_t4) in order to enable said first determining means (DET1) to determine according to each said time information (T1_t1, T2_t2, T3_t3, T4_t4) associated to said at least two packets (T1, T2, T3, T4), and according to each said predefined packet length (l1, l2, l3, l4) associated to said at least two packets (T1, T2, T3, T4), characteristics of a first relation (f1(T, α)) between a packet length of a packet to be transmitted from said source (S) to said destination (D) and a source to destination delay (d-S2D) being a time period between said transmission of said packet by said source (S) and reception of said packet by said destination (D); and in order to enable a third determining means (DET3) to determine an optimal packet length (l-opt) for a preferred mouth to ear delay (d-M2E-pref) according to said characteristics of said first relation (f1(T, α)) and to enable thereby said source terminal to apply said optimal packet length (l-opt) for transmission of packets of said real time data communication (C), said preferred mouth to ear delay (d-

M2E-pref) being determined by a second determining means (DET2) according to a preferred quality rating (Q-pref) for said real time data communication.

10. The destination (D) according to claim 9, characterized in that said destination (D) further comprises said first determining means (DET1).

11. A communication network **characterized** in that said network comprises any one a source (S) according to any one of claim 5, claim 6, claim 7 and claim 8 and a destination (D) according to any one of claim 9 and claim 10.